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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,849	07/08/2003	Edward Fu-Hua Chu	405100	9131
27717	7590	09/10/2004	EXAMINER KITOV, ZEEV	
SEYFARTH SHAW 55 EAST MONROE STREET SUITE 4200 CHICAGO, IL 60603-5803			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,849

Applicant(s)

CHU ET AL.

Examiner

Zeev Kitov

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) 5 - 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

During a telephone conversation with Attorney, Mr. Harold Stotland on August 30, 2004, a provisional election was made with traverse to prosecute the invention of Claims 1 – 4 (Group I). Affirmation of this election must be made by applicant in replying to this Office action. Claims 5 – 10 (Group II) are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### **Distinctness**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

The inventions are distinct, each from the other because:

- I. Claims 1 – 4, drawn to Group I, classified in class 361, subclass 41.
- II. Claims 5 - 10, drawn to Group II, classified in class 361, subclass 32.

Group I (Claims 1 – 4) and Group II (Claims 5 – 10) disclose two distinct inventions, which can be manufactured and used individually. Generation of the cracking face in order to prevent a short circuit is achieved in Group I and Group II Claims different way. Therefore the inventions are distinct.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al. (US 6,211,771). Regarding Claim 1, Zhang et al. disclose all the elements of the claim including a current-sensing element exhibiting positive temperature coefficient behavior, the current-sensing element including an upper electrode foil (element 30 in Fig. 2 and 3), a bottom electrode foil (element 50 in Fig. 2 and 3) and a conductive material (element 7 in Fig. 2 and 3); an upper metallic conductive sheet (element 2 in Fig. 4) connected to the upper electrode foil and having at least one notch on its surface (element 302 in Fig. 4); and a bottom metallic conductive sheet connected to the bottom electrode foil (not numbered, shown in Fig. 4). Since all structural elements of the claim are satisfied, the functional limitation should be satisfied as well, i.e. the notch generates a cracking face in the current-sensing element during the burning of the over-current protection device.

Regarding Claim 2, Zhang et al. disclose the bottom metallic conductive sheet has at least one notch on its surface (shown in Fig. 4, not numbered).


Regarding Claim 3, Zhang et al. disclose the notch formed by an etching process (col. 5, lines 55 – 60).

Regarding Claim 4, Zhang et al. disclose (as shown in Fig. 1 - 4) the area of the notch is over 1% of the area of the upper metallic conductive sheet.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (703) 872-9306 for all communications.

Z.K.  
08/31/2004



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